

ZABEZHENSKAYA, P. I.

USSR/Chemistry - Grignard Reaction
Chemistry - Halides

Mar 1948

"Grignard Reaction with Aliphatic and Alicyclic Tertiary Halides," A. F. Plate,
P. I. Zabezhenskaya, Inst Org Chem, Acad Sci USSR, Moscow State U imeni
M. V. Lomonosov, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 8

States that one of the methods used for obtaining hydrocarbons with quaternary
atom of carbon is the reaction between tertiary alkyl magnesium halide and chlorine
or bromine allyl, and describes use of this reaction for the synthesis of certain
cyclopentane homologs. Submitted by Academician B. A. Kazanskiy, 26 Dec 1947

PA47T16

CA ZABEZHENSKAYA, P.I.

10

Synthesis of 2-ethylbicyclo[2.2.2]octane and 2-propylbicyclo[2.2.2]octane. H. A. Karanskii and P. I. Zabezhenskaya. *Doklady Akad. Nauk S.S.S.R.* 77, 57 (1959).

1. *endo*-bicyclo[2.2.2]octane, bp 70.4-70.5°, n_D^{20} 1.4363, d_4^{20} 0.8918 (lit. 1.436, 0.891); heated in a sealed tube with 20 g. acetone at 100° gave 80.8% 2,3-*endo*-ethyl-1,2,3,6-tetrahydrooctahydro-1,4-diene, bp 84.5°, n_D^{20} 1.4945, d_4^{20} 0.8910 (semicarbazone, m. 110-111°). This treated with MeMgI in very dil. Et₂O solution gave 73% methyl 2,3-*endo*-ethyl-1,2,3,6-tetrahydrooctahydro-1,4-diene (I), bp 100-101°, n_D^{20} 1.4920, d_4^{20} 0.8985; treatment with H₂ over Raney Ni at room temp. gave the *sald.*, *etc.*, bp 103-4°, n_D^{20} 1.4952, d_4^{20} 0.8923, which on oxidation with CrO₃ in AcOH at 70° gave the corresponding *exo*-ketone, *Callad.*, bp 94.5°, n_D^{20} 1.4910, d_4^{20} 0.8973 (semicarbazone, m. 104-105°). This (12 g.), in 10 ml. EtOH, and 5 g. NaOH, refluxed 3.5 hrs., cooled, and heated with 3 g. solid KOH and some Pt-C gave 2-ethylbicyclo[2.2.2]octane, bp 168-9°, n_D^{20} 1.4729, d_4^{20} 0.8813. EtMgBr in the above synthesis gave the *Ex* homolog of 1.78% bp 99-100°, n_D^{20} 1.4935, d_4^{20} 0.8912, hydrogenated over Raney Ni to the *sald.*, *etc.*, bp 114°, n_D^{20} 1.4973, d_4^{20} 0.8902, which yielded the corresponding *Ex* ketone, bp 98-99°, d_4^{20} 0.8888, n_D^{20} 1.4894 (semicarbazone, m. 189.5-90° (decum.)); the ketone treated as above gave 53% 2-propylbicyclo[2.2.2]octane, bp 175.5-6.5°, n_D^{20} 1.4742, d_4^{20} 0.8813. G. M. Kosolapoff

ZABEZHENSKAYA, P. I.

Card: Chem. Sci

"Synthesis and Catalytic Conversion of Hydrocarbons of the Dicyclo (2,2,2) Octane Series." Sub 11 May 51, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

ACC NR: AI7003094

SOURCE CODE: UR/0237/66/000/007/0043/0047

AUTHOR: Skvortsov, G. Ye.; Panov, V. A.; Zabezhinskiy, A. D.; Dolinskiy, I. M.

ORG: none

TITLE: ¹⁴ Micro-hardness meter with remote control model PMT-4

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 7, 1966, 43-47

TOPIC TAGS: hardness, laboratory instrument

ABSTRACT: A description of a device with remote control for measurement of micro-hardness of sections subjected to gamma rays. In the device, the loading of the indenter and all operations necessary for production of imprints with the diamond pyramid into the materials being tested are performed automatically with high accuracy. In addition to the authors, Engineers G. S. Zakharov, Ye. S. Kuleshova, B. I. Tikhomirov took part in the building of the PMT-4 device. Orig. art. has: 2 figures. [JPRS: 38,228]

SUB CODE: 14 / SUBM DATE: 22Mar65 / ORIG REF: 002

Card 1/1

UDC: 539.533

0725

3045

ZABEZHANSKIY, I.I., inzh.; CHERNOBROVOV, N.V., inzh.

Experience in the operation of an automatic voltage regulation
system. Elek. sta. 34 no.9:23-25 S '63. (MIRA 16:10)

ZABEZHINSKIY, M.M.

Mathematical processing of measuring results. Izv.vys.ucheb.zav.;fiz.
no.2:3-6 '63.

(MIRA 16:5)

1. Novosibirskiy elektrotekhnicheskiy institut svyazi.
(Errors, Theory of)

ZABEZHINSKY, H.H.

Standard specimens of surface finish. Truly VHLIM no.2:18-24
147. (MIRA 12:1)

(Metals Finishing)

S/044/62/000/004/083/099
0111/0222

AUTHOR: Zabezhinskiy, M. M.

TITLE: On the application of the theory of probability to estimate the exactness of measurements

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 17, abstract 4V105. ("Tr. Novosib. s.-kh. in-ta," 1959, 20, no. 3, 20-25)

TEXT: Let X be the exact value of a quantity, let M_{mean} be the arithmetic mean of N measurements of this quantity and let S^2 be the electrical dispersion $S = \frac{\sigma}{\sqrt{N}}$. Then $z = \frac{M_{\text{mean}} - X}{S}$ has a Student distribution with $N-1$ degrees of freedom, and this distribution converges for $N \rightarrow \infty$ to the normal distribution. Therefore, in the case of small N , the use of the normal distribution (according to the author this often happens in laboratories) leads to exaggerated estimates of the measuring exactness. This statement is supported by an example and with tables. The author suggests that when stating the final results of measurements,

Card 1/2

On the application of the theory ...

S/044/62/000/004/083/099
C111/C222

not only the arithmetic mean and the error estimate, but also N and α .
should be given. This would make it possible to compare the observations
of different observers. ✓

[Abstracter's note: Complete translation.]

Card 2/2

ZABEZHINSKIY, V.I., inzh.; ALEKSANDROV, M.A., inzh.

Calculation of the mechanical strength of cantilever
beams under the action of distributed loads. Vest.mash.
42 no.3:51-54 Mr '62. (MIRA 1513)
(Beams and girders)

1ST AND 2ND DEGREE
 PROCESSING AND PREPARATION INDEX
 2-1

Dynamics of sorption. A. A. SHUCKOVITSKI, J. L. ZAKHARINSKI, and D. B. SOLOVSKI (J. Phys. Chem. Russ., 1930, 13, 302-310).—Macklenberg and Kubelka's theory (Z. Elektrochem., 1925, 31, 486) is invalidated by mathematical and other errors and has no physical basis. R. C.

658-55.4 METALLURGICAL LITERATURE CLASSIFICATION
 FROM CIVILIZATION
 FROM SOURCE
 161

Pa

Kinetics of adsorption and desorption. Ye. I. Zhabitskii. *J. Phys. Chem.* (U. S. S. R.) 14, 139-41 (1940).
The equations $dA/dt = \beta_1(A_\infty - A)$ for adsorption and $-(dA/dt) = \beta_2(A - A_\infty)$ for desorption are derived, where A_∞ = max. adsorption. For β_1 greater than β_2 , desorption is less rapid than adsorption (normal case, e. g., cyclohexane on charcoal); for β_1 less than β_2 , desorption is more rapid, e. g., H₂O on charcoal. F. H. R.

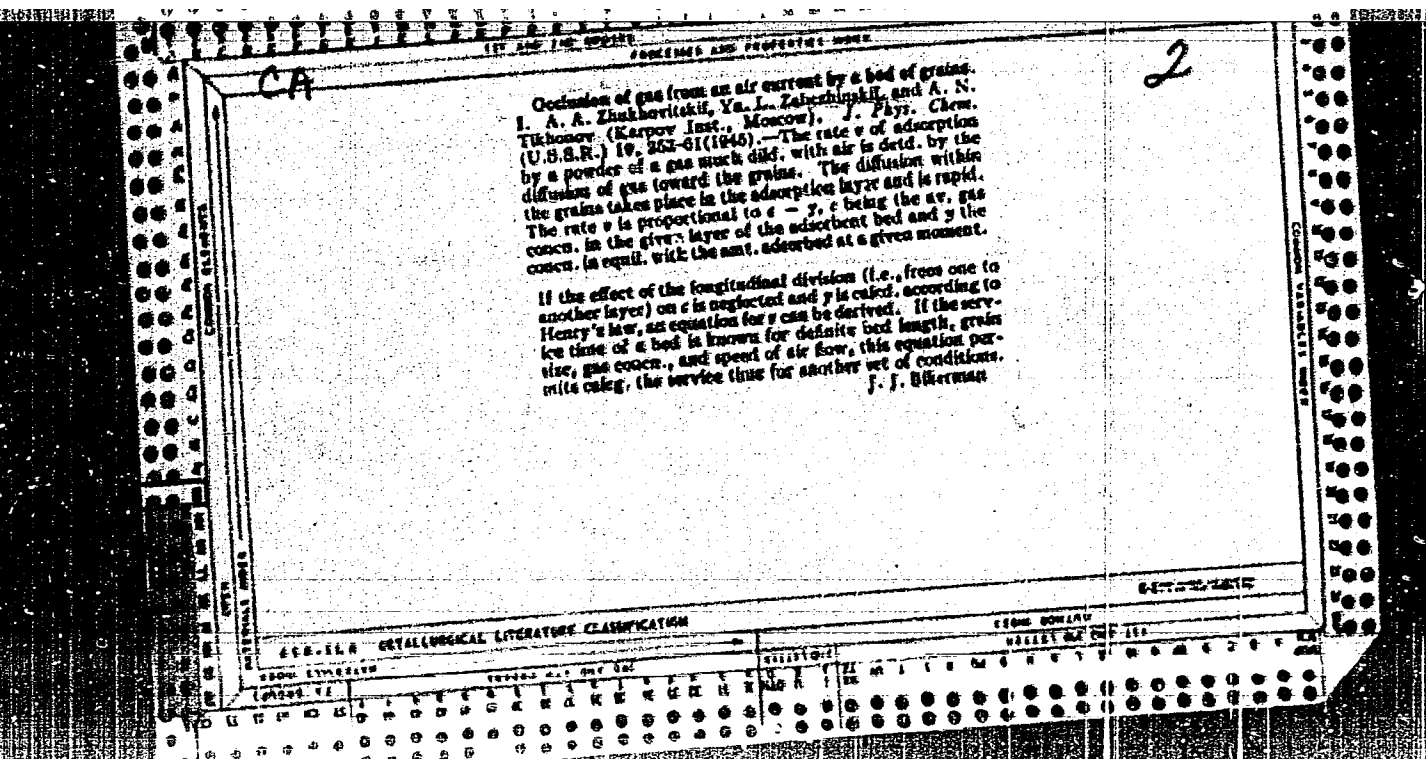
GENERAL METALLURGICAL LITERATURE CLASSIFICATION

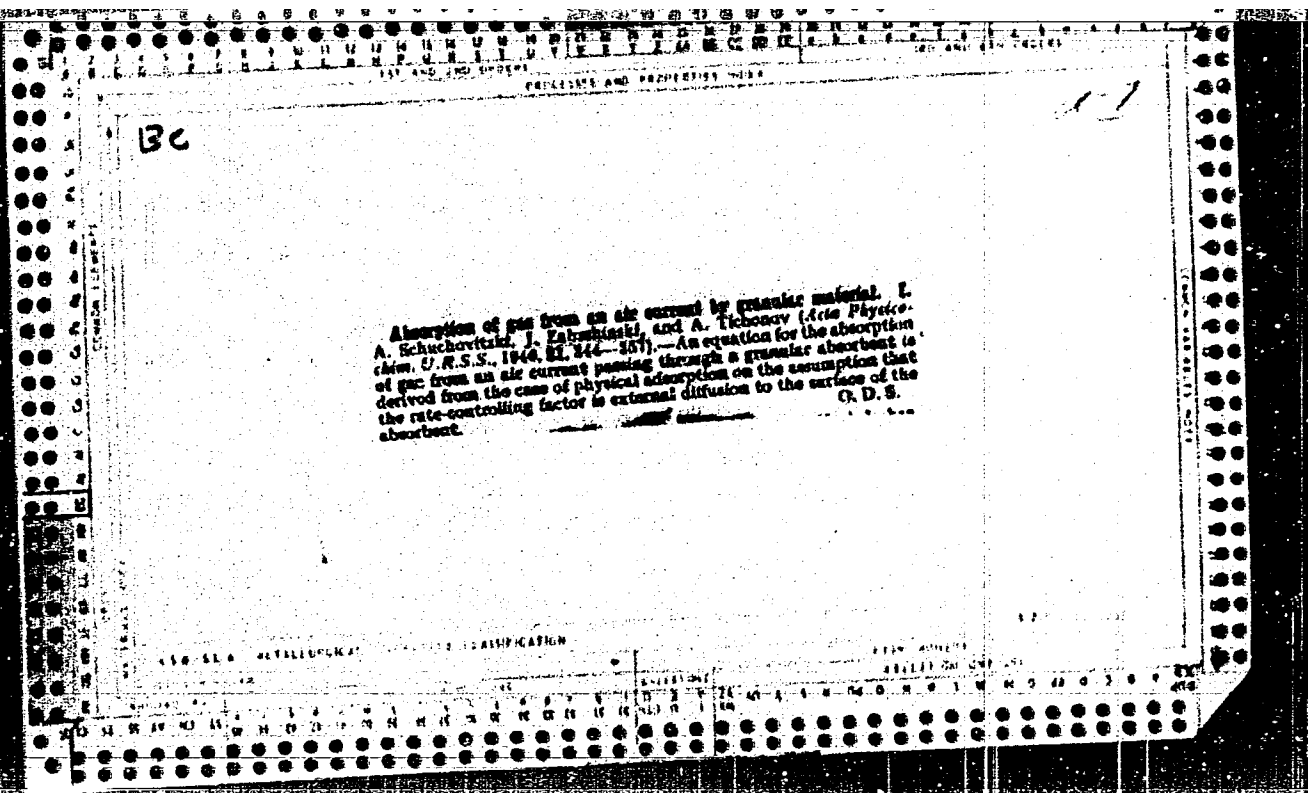
COUNTRY OF ORIGIN	LANGUAGE	SUBJECT	DATE	AUTHOR	TITLE	EDITORIAL INDEX	OTHER INDEXES
U.S.A.	English	Metallurgy	1940	Smith	Iron and Steel		
U.S.S.R.	Russian	Metallurgy	1940	Zhabitskii	Kinetics of Adsorption and Desorption		
Germany	German	Chemistry	1940	Haber	Nitrogen Fixation		
France	French	Physics	1940	Langevin	Electromagnetic Induction		
Italy	Italian	Biology	1940	Ferraro	Plant Growth		
Japan	Japanese	Engineering	1940	Yamamoto	Mechanics of Solids		
Sweden	Swedish	Medicine	1940	Wahlberg	Disease Prevention		
Spain	Spanish	History	1940	Garcia	Spanish Literature		
Poland	Polish	Mathematics	1940	Kurczak	Calculus		
Czechoslovakia	Czech	Geography	1940	Stedra	Physical Geography		
Soviet Union	Russian	Science	1940	Various	General Science		

kin. 1.6

Rate of sorption by grains. J. Zabezhinski (J. Phys. Chem. Russ., 1943, 17, 32-44).—A cylinder, 8 mm in diameter, of activated anthracite C is kept in streaming air containing EtOH, and the rate da/dt of wt. increase is determined; then pure air is passed through, and the rate $-da_1/dt$ of desorption is measured. It is found that $da/dt = \beta(c_2 - c)$ and $-da_1/dt = \beta c_1 c_2$ being [EtOH] in air, c and c_2 the [EtOH] which would have been in equilibrium with the adsorbed amount a and a_1 , respectively. If the relation between a and c (i.e., the adsorption isotherm) is known, the sorption and desorption rates can be calc. The agreement with experiment is satisfactory, and the const. β is identical for sorption and desorption. It is also independent of [EtOH] between 2 and 9 mg. per l. $\beta \propto v^{0.46}$, v being the velocity of air (between 75 and 1300 c.c. per sq. cm. per min.) and d the diameter of the cylinder (0.16-0.2 cm.). Value of β for birch charcoal and for fruit-stones charcoal differ from that for anthracite C by only 20-40%. These results agree with the theory that β depends mainly on the external diffusion. Sorption isotherms are determined also for H_2O , $MeOH$, $PrOH$, and $ivOH$. H_2O is the only substance the desorption of which is more rapid than the sorption.

J. J. B.





ZABEZHINSKIY, J. V.

PA 26T60

USSR/Physica
Absorption
Mathematics - Applied

Jan 1947

"Absorption of Gas from an Air Current by Granular Material, Part II," A. Tikhonov, A. Schuchowitzky, J. Zabezhinskiy, Karpov Institute of Physical Chemistry, Moscow, 16 pp

"Acta Physicochimica URSS" Vol XXII, No 1

A solution is given to the simple linear differential equations describing gas absorption. Experimental data is compared with theoretical results, in tabular and graphical form.

PA 26T60

BS

ZABEZHINSKIY, YA. L.

PA 47/491102

USSR/Physics
Absorption

Feb 49

- X "Absorption of Gas From an Air Current by a Layer of Granular Material III," Ya. L. Zabezhinskiy, A. A. Zhukhovitskiy, A. N. Tikhonov, 10 pp
- X

"Zhur Fiz Khim" Vol XXIII, No 2

Conducted experiments with activated carbon using diethyl ether as a sorbate to verify theoretical results of previous reports on certain dependencies of concentration C at a distance L upon the time θ for various types of isotherms. Submitted 26 Feb 47.

47/491102

ZABEZHINSKIY, Ya., doktor khimicheskikh nauk; RATINOV, V., starshiy nauchnyy
sovrudnik, kandidat khimicheskikh nauk.

Study of the properties of gypsum; extending its uses. Stroimaterialy.
izdel.1 konstr. 2 no.1:28-29 Ja '56. (MLRA 9:5)

1. Zaveduyushchiy laboratoriiy gipsovykh izdeliy VNIITeleko-
betona (for Zabezhinskiy)
(Gypsum)

Handwritten: *Handwritten*

Handwritten: *All-Union Sci. Res. Inst. for Reinforced Concrete
Products*

RATIMOV, V.B.; ZABEZHINSKIY Ya.L.; ROZENBERG, T.I.

Study of the solidification mechanism of gypsum binding materials with admixtures. Dokl. AN SSSR 109 no.5:979-981 Ag. 1956.

(RUSSIA 9:10)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy institut zhelezobetonnykh izdeliy i nerudnykh materialov, Predstavleno akademikom P.A. Radinderom.

(Gypsum)

ZABGORODNIY, S.V.; SIDEL'NIKOVA, V.I.

Alkylation of diphenyl by pseudobutylene in the presence of BF_3
 H_3PO_4 . Dokl. AN SSSR 118 no.1:96-98 Ja-F '58. (MIRA 11:3)

1. Voronezhskiy gosudarstvennyy universitet. Predstavleno akademikom
A.V. Topchiyevym.

(Alkylation) (Biphenyl)

BRATOS, Zygmunt; ZABIAK, Franciszek (Warszawa)

Problem of using gypsum in the construction industry.
Przeegl budowl i bud mieszk 35 no.10:542-544 0'63.

ZABIAK, Franciszek (Warsaw)

Role and importance of internal supervision in construction enterprises. Przegl budowl i bud mieszk 27 [i.e. 37] no.3: 165-168 Mr '65.

POLAND

ZABICKA, Jadwiga; Planning-Scheduling Section (Dzial Metodyczno-Organizacyjny)
and Department of Epidemiology (Zaklad Epidemiologii) of State Hygiene
Institute (Panstwowy Zaklad Higieny,) [Warsaw]

"Epidemiology of Mumps in Poland in 1961."

Warsaw, Przegląd Epidemiologiczny, Vol 19, No 4, 1965; pp 445-449.

Abstract [English summary modified]: In 1961, mumps was the third most
frequent infectious disease with 69,057 cases reported, or a morbidity of
232 per 100,000 inhabitants; right behind influenza (1952) and measles (461.)
Data on ages, sex, season, location. Diagram, graph, 5 Tables.

ZABICA, Tonko

Split District in the general outlook and realizations of the
Yugoslav tourist trade. Geogr hor 9 no.3:39-40 '63.

Tourist news.

57-59

SMIGIELSKI, Jozef (Gdansk); ZABICKI, Andrzej (Gdansk); DUDZISZ, Jerzy (Gdansk)

Results of experimental studies on the reaction of turbine blade
cascades with a velocity exceeding that of sound. Inst masz przep
PAN no.13:19-36 '63.

ZABICKA, Z.; DOSTAL, K.; SOVJAK, J.

"Wet method for suction and removal of dust in foundries. p. 240"

SLEVARENSTVI. (Ministerstvo tezkého strojírenství a Československá vědecká
technická společnost pro hutnictví a slevarenství) Praha, Czechoslovakia,
Vol. 3, No. 8 Aug. 1955.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6 June 1959
Uncl.

COUNTRY	: POLAND	H
CATEGORY	: Chemical Technology. Chemical Products and Their Applications. Ceramics. Glass. Binding*	
ABS. JOUR.	: RZKhim., No. 23 1959, No. 82958	
AUTHOR	: <u>Zaboklicki, W.</u>	
INST.	: -	
TITLE	: Study of Hydrocyclones in the Enrichment of Indigenous Kaolin	
ORIG. PUB.	: Szkło i ceramika, 1959, 10, NO 3, 80-82	
ABSTRACT	: A detailed description of commercial experi- ments performed on the wet enrichment of Be- leslevetzkii (mined at "Mariya", Vroslavskiy district, PDR) with the use of hydrocyclones (HC), operating at the porcelain factor, Imeni Revolyutsiya 1905 in Vroslavsk. The enriched kaolin fully met the required spe- cifications and conformed with technical conditions for quality and was found suitable for the ceramic and paper industries. The	
CARD:	*Materials. Concrete. 1/2	

H - 45

ZABIAK, F.; PRATOS, Z.

Is it necessary to import? p.42

SZKLO I CERAMIKA. (Centralne Zarzady Przemyslu Szklarskiego i Ceramicznego
oraz Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Przemyslu Chemicznego)
Warszawa, Poland. Vol.10, no.2, Feb.1959

Monthly List of East European Accessions Index, (EEAI) L, Vol.8, no.6,

June 1959

Uncl.

BRZOZOWSKI, Wojciech (Gdansk); SMIGIELSKI, Jozef (Gdansk); ZABICKI, Andrzej
(Gdansk)

High-speed wind tunnel studies on the cascades of TP2 and A1a
impulse type turbine profiles. Inst masz przep PAN no.5:3-59 '61.

ZABICKI, S.

ZABICKI, S.

"Workers' Inventiveness in the Field of Industrial Safety", P. 147.
(CHEMIK, Vol. 6, No. 5, May 1953, Katowice, Poland)

SC: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 1, Jan. 1955, Incl.

ZABICKI, S.

ZABICKI, S.

"Popularizing Technical Improvements", P. 149. (CHEBIK, Vol. 6, No. 5, May 1953, Katowice, Poland)

SO: Monthly List of East European Accessions, (EPAL), IC, Vol. 4, No. 1, Jan. 1955, Uncl.

ZABICKI, S.

ZABICKI, S.

"Result of the Contest in Industrial Safety", P. 149. (CHEMIK, Vol. 6,
No. 5, May 1953, Katowice, Poland)

SO: Monthly List of East European Accessions, (EFAL), IC, Vol. 4,
No. 1, Jan. 1955, Uncl.

ZABICKI, S.

Bhp w przemyśle barwników i półproduktów (Work Safety and hygiene in the dyestuff industry), by S. Zabicki. Reported in New Books, (Nowe Książki), No. 6, March 15, 1956.

POTAPOW, Jerzym mgr inz.; RADOMSKI, Stanislaw, mgr inz.; ZABICKI, Stefan, inz.

Foam fire fighting installation on a B-74 type tanker.
Bud okretowe Warszawa 8 no.7:222-224 J1 '63.

1. Biuro Konstrukcyjne Stocani im. Komuny Paryskiej, Gdynia.

ZABICKI, Zbigniew

Stefan Zolkiewski. Nauka polska 11 no.2:63-72 Mr-Ap '63.

1. Instytut Badan Literackich, Polska Akademia Nauk, Warszawa.

ZABIDAROV, V.I., inzh.; MOTOVILOV, V.V., kand.tekhn.nauk [deceased]

Simple remote signaling system. Energetik no.9:25-28 8 '64.
(MIRA 17:10)

MOTOVILOV, V.V., kand. tekhn. nauk, dotsent [deceased]; ZABIDAROV, V.I.,
kzh.

Remote signaling system for industrial enterprises. Izv. vys.
ucheb. zav.; energ. 7 no.11:107-111 N '64 (MIRA 18:1)

1. Kuybyshevskiy politekhnicheskij institut imeni V.V. Kuybysheva.
Predstavlena kafedroy elektricheskikh stantsiy.

21(7)

SOV/89-7-3-16/29

AUTHORS:

Sakharov, V. N., Kolesnikov-Svinarev, V. I., Mazarenko, V. A.,
Zabidarov, Ye. I.

TITLE:

The Angular Distribution of the Radiation of Au¹⁹⁸ Scattered
in Air Above Ground

PERIODICAL:

Atomnaya energiya, 1959, Vol 7, Nr 3, pp 266-267 (USSR)

ABSTRACT:

From a $\sim 10,000$ c Au¹⁹⁸-source, which was located 1.5 m and 2.5 m above the ground, the total intensity of radiation in distances of up to 600 m from the source as well as the angular distribution of radiation in distances of 150, 250 and 400 mm from the source was measured. The total intensity was measured by means of a Geiger counter described in reference 1, in which the multiple scattered γ -quanta with energies of between 120 and 410 kev were recorded with the same sensitivity. Radiation with energies of between 60 and 120 kev were measured by means of a somewhat more sensitive counter. γ -quanta with energies below 50 kev were not recorded. Angular distribution was measured by means of a detector consisting of 4 counters connected in series, which was placed behind a thick lead disk (diameter 21 cm) in such a manner that the centers of this disk and of the detector were in one line with the center of the source. The following measuring results are graphically

Card 1/2

The Angular Distribution of the Radiation of Au¹⁹⁸ Scattered in Air Above Ground

SOV/89-7-3-16/29

given: Dependence of the absorption coefficient and of the intensity of the non-scattered radiation on the distance between the source and the detector. Angular distribution of the scattered radiation. By placing source and detector near the ground, the radiation intensity at large distances becomes about twice as small as in homogeneous air. If the distance between source and the ground is increased, this difference becomes smaller and attains only the 1.5-fold and a height of about 25 m at the same distances as before. This is in agreement with the predictions made by reference 4. With respect to angular distribution it may be said that, from distances of 150 m onward, it practically undergoes no further change. The results obtained may be used in order more easily to calculate γ -shields. The problem was raised by O. I. Leypunskiy. V. A. Rogachkov, V. A. Shabashov and V. N. Rodionov assisted in working with the strong γ -preparation. There are 4 figures and 4 Soviet references.

SUBMITTED: February 18, 1959

Card 2/2

2(5)

AUTHORS: Sakharov, V. N., Kolesnikov-Svinarev, V. I., SOV/20-124-2-20/71
Nazarenko, V. A., ~~Zabidarev, Ye. I.~~

TITLE: The Areal Distribution of Earth Ejected by Subterranean
Explosions (Raspredeleniye na mestnosti grunta, vybrasyvayemogo
pri podzemnykh vzryvakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2, pp 314-317
(USSR)

ABSTRACT: The Institut khimicheskoy fiziki AN SSSR (Institute for
Chemical Physics, AS USSR) collected experimental material
concerning the distance of ejection of various portions of
earth ejected by an explosion. The material is in many respects
of some interest. When carrying out such experiments, it is
necessary first to divide the area of ground before the
explosion takes place within range of the crater to be formed
into sections, and after the explosion the manner in which the
fragments of earth are distributed over the said area must be
determined. Various parts of the area were marked by means of
radioactive indicators. Before the explosion 50-60 ampoules

Card 1/3

containing 1 millicurie Sb¹²⁴ were introduced into the soil

The Areal Distribution of Earth
Ejected by Subterranean Explosions

SOV/20-124-2-20/'11

through narrow cracks. 20 of such explosions were carried out in this manner with from 10 kg to 10 t ammonite Nr 6 at various depths both in loess and in loam. Further, 1000 tons of ammonite Nr 6 were exploded in a depth of 40 m. The characteristic results given by 2 diagrams permit the following conclusions to be drawn: 1) The direction into which each particle of earth is ejected leads, when traced back in the opposite direction, through the center of the explosion. The direction in which that part of the ground which is located immediately above the charge is ejected is indefinite. 2) The distance covered by each ejected part of the earth is determined by its position with respect to the charge and varies, with conditions otherwise being unchanged, within the margin of $\pm 30\%$. 3) The dependence of the distance of flight from the position of the respective part of the ground before the explosion is shown by a nomogram. The smaller the angle between the radius and the axis of the crater, the farther will the earth be thrown. This dependence is commented upon in detail by the authors. These regularities are qualitatively the same with all explosions of charges of different strength. The maximum distance covered by the ejected earth increases only

Card 2/3

The Areal Distribution of Earth
Ejected by Subterranean Explosions

SOV/20-124-2-20/11

slightly with an increase of the charge. With conditions otherwise remaining unchanged this distance decreases with an increase of the depth w of the charge at the rate of $1/w^4$. All this holds for explosions in loess, and for powerful explosions in loam, but not for weak explosions (10-100 kg) in solid loams. In the latter case no permanent regularities were found. Finally, the authors thank M. A. Sadovskiy, Corresponding Member, AS USSR, for bringing up the problem, and V. N. Rodionov for his collaboration in organizing the above described work as well as for discussing the results. V. A. Rogachkov and V. A. Shabashev are gratefully mentioned as having rendered practical assistance.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute for Chemical Physics of the Academy of Sciences, USSR)

PRESENTED: September 18, 1958, by V. N. Kondrat'yev, Academician

SUBMITTED: September 15, 1958

Card 3/3

L 12049-66 EWT(m)/EPF(n)-2/EWP(t)/EWP(z)/EWP(b)/ENA(h) IJP(c) JD/HW
 ACC NR: AP6002656 SOURCE CODE: UR/0386/65/002/012/041/0544
 AUTHOR: Drabkin, G. M.; Zabidarov, Ye. I.; Kasean, Ya. A.; Okorolov, A. I.
 ORG: Physicotechnical Institute im. A. P. Toffe, Academy of Sciences SSSR (Fiziko-
 tekhnicheskiy institut Akademii nauk SSSR)
 TITLE: Critical scattering of polarized neutrons in nickel
 SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pika v redaktsiyu.
 Prilozheniye, v. 2, no. 12, 1965, 541-544
 TOPIC TAGS: nickel, neutron scattering, small angle scattering, phase transition,
 Curie point, neutron polarization
 ABSTRACT: A study of the critical small-angle scattering of neutrons is a very ef-
 fective means of investigating phase transitions. To obtain more complete informa-
 tion on space-time spin correlation motions, which are responsible for the dynamics
 of the phase transitions, the authors investigated the critical scattering of
 polarized neutrons. They present in this article the results of the first stage
 of this research. The measurements were made with the aid of a previously de-
 scribed installation (G. M. Drabkin et al., ZhETF v. 47, 2316, 1964). A single-
 crystal nickel sample was placed in a ~10 oe magnetic field. The sample tempera-
 ture was kept accurate to $\pm 0.07^\circ$. The beam of the incident neutrons is character-
 Card 1/2

L 12049-66

ACC NR: AP6002656

ized by the following parameters: wavelength $\sim 5.1 \text{ \AA}$, polarization after reflection from the analyzer 80%, horizontal divergence $\pm 1.5 \text{ min}$, vertical $\pm 10 \text{ min}$. The experiments yielded the polarizations of the scattered neutrons passing through the sample and of the neutrons scattered through $10.2 \text{ minutes of angle}$. The Curie point was determined from the maximum scattering cross section. Near the Curie point the behavior of the polarization of the transmitted neutron beam is connected with the development of magnetization fluctuations. The magnetic fields of these fluctuations give rise to non-coherent precession of the spins of the neutrons passing through the sample. This precession is just the cause of the depolarization. The polarization of neutrons scattered through 10.2 minutes is analyzed in detail. It is concluded that the neutron scattering is quasielastic near the phase transition point, and it is noted that a direct determination of such a change in the scattered-neutron energy is beyond the capabilities of modern experimental techniques. Authors are grateful to S. V. Maleyev for valuable advice and to D. M. 55 Kaminker for interest in the work and a discussion of the results. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/

SUBM DATE: 29Oct65/

CRIG REF: 002/

OTH REF: 004

Cord 2/2

ZADIKYAN, A.A.

BEREGOVSKIY, Vladimir Iosifovich; GUDIMA, Nikolay Vasil'yevich; VANYUKOV, V.A., professor doktor, zasluzhannyy deyatel' nauki i tekhniki, retsenzent; VANYUKOV, A.V., dotsent, kandidat tekhnicheskikh nauk, retsenzent; IL'ICHEV, G.Y., inzhener, retsenzent; ZADIKYAN, A.A., inzhener, retsenzent; RESHETNIKOV, F.G., redaktor; ARKHANGEL'SKAYA, M.S., redaktor izdatel'stva; ATTOPOVICH, M.K., tekhnicheskii redaktor

[Nickel metallurgy; a textbook for schools and courses for specialists]
Metallurgiya nikelia; uchebnoe posobie dlia shkol i kursov masterov.
Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi metallurgii, 1956. 355 p. (MLRA 9:10)
(Nickel—Metallurgy)

ZABIELA, P., jaun. moksl. bendr.

Serotonin. Sveik. apsaug. 8 no.1:31-35 Ja'63.

1. Kauno Valst. medicinos instituto Centrine mokslinio tyrimo
laboratorija. Rektorius - prof. Z. Januskevicius.

*

SNIPAS, P., med. m. kand.; PAULASKAS, S.; ZABIELA, P.

On the problem of patient-physician relations. Sveik. apsaug.
8 no. 5:43-46 '63.

1. Kauno Valst. medicinos instituto hospitalines terapijos
katedra (vedejas - prof. Z. Januskevicius) ir Resp. Kauno
klinine ligonine (vyr. gydytojas - doc. P. Jasinskas).
(PHYSICIAN-PATIENT RELATIONS)
(ETHICS, MEDICAL)

JANUSKEVICIUS, Z., prof. ZABIELA, P.

Arteriosclerosis as the cause of death according to autopsy data in Vilnius and Kaunas. Sveik. apsaug. 9 no.2:3-6 1964.

1. Kauno Valst. medicinos instituto Centrine mokslinio tyrimo laboratorija. Rektoriui: prof. Z. Januskevičius.

*

KOZLOWSKI, Jan; ZABIELLO, Eugeniusz

A case of Reiter's disease, Przegl. dermat., Warsz. 46 no. 6: 559-570
N-D '59.

1. Z Zakładu Dermatologii i Wenerologii Studium Doskonalenia
Lekarzy w Bydgoszczy. Kierownik: dr. J. Kozłowski.
(REITER'S DISEASE case report)

DOERFFER, Jerzy, prof. dr inz.; BURAU, Herman, mgr; ZABIELLO, Erazm,
mgr inz.; STOLAREK, Piotr; MURZYNSKI, Konrad, mgr inz.;
MADEJ, Jan

Twenty years at the seaside and on the sea. Przegl techn
85 no.26:6,7 28 Je'64.

1. Chairman of the Voivodeship Contacts Committee, Central
Technical Organization, Gdansk (for Doerffer). 2. Chief
Executive, Polish Ocean Lines, Gdynia (for Burau). 3. Chief
Executive, Komuna Paryska Shipyards, Gdynia (for Zabiello).
4. Chairman, Gdansk Voivodeship People's Council (Stolarek).
5. Director, Gdansk Association of the Building Industry
(for Murzynski). 6. Secretary of the Gdansk Voivodeship
Committee of the Trade-Unions. (for Madej).

ZABIELSKA, Joanna; MALDYK, Henryka

Results of liver function tests in patients with rheumatoid arthritis. Reumatologia (Warsz) 3 no.1:63-67 '65.

1. Z II Oddziału Instytutu Reumatologicznego w Warszawie
(Kierownik: dr. med. W. Bruhl; Dyrektor Instytutu: dr. med.
W. Bruhl).

ZABIELSKI, B.

"A forest protection program as part of the management plan."

p.55 (Sylvan, Vol 102, no. 9, Sept 1958, Warsaw, Poland)

Monthly Index of East European Accessions (AAEI) LC, Vol 9, Sept 58

ZABIELSKI, Kazimiera

Problem of amending chapters 32 and 33 of the Universal Deciral
Classification. Akt probl inf dok 7 no.3:6-13 Ky-Je '62.

REICHER, Eleonora, Prof. Dr.; ZABIELSKA, J., lek.

Cutaneous dye tests in rheumatism. Postepy reumat. no.1:66-78 1954.

1. Z Panstwowego Instytutu Reumatologicznego Dyrektor prof. dr E. Reicher.

(RHEUMATISM, therapy,

ACTH & cortisone, eff. on Evans blue & methylene blue skin tests)

(ACTH, therapeutic use,

rheum., eff. on Evans blue & methylene blue skin tests)

(CORTISONE, therapeutic use,

rheum., eff. on Evans blue & methylene blue skin tests)

(METHYLENE BLUE,

skin test in rheum., eff. of ACTH & cortisone)

(EYES,

Evans blue skin test in rheum., eff. of ACTH & cortisone)

(SKIN, in various diseases,

rheum., Evans blue & methylene blue tests, eff. of ACTH & cortisone)

ZABIEROWSKI, M.

Gospodarka Zbozowa - Vol. 6, no. 5, May 1955.

Campaign of grain purchasing is approaching. p. 1.

Consignor must have right of taking protective tests. p. 5.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

ZABIEROWSKI, Wladyslaw (Lengyelország)

Society of Polish Textile Specialists. *Hagy textil* 15 no.5/6:
194-196 My-Je '63.

BRZEZINSKA, Hladya; ZABIEJSKA, Joanna

Result of ambulatory therapy in rheumatism of soft tissues. Reuma-
tologia Polska no.3:45-48 '60.

1. Z Instytutu Reumatologicznego w Warszawie Dyrektor: prof. dr med.
E. Reicher

(RHEUMATISM ther)
(FIBROSITIS ther)

ZABIELSKI, Boleslaw

Influence of intensive clearing on the growth increase of the surface trunk and the mass of wood in fir tree stands. Roczniki wyz szkola rol Poznan 14 209-228 '63.

Average growth increase of the wood mass as a basis of computing the current growth in forest planning. Ibid, 229-232.

1. Department of Forest Planning, College of Agriculture, Poznan.

ZABIELSKI, Boleslaw; MAGNUSKI, Konrad; WAZYNSKI, Bohdan; ZOLCIAK,
Edward

Development analysis of oak regeneration in a pine stand
by using the gap cutting method. Roczniki wyz szkola rol
Poznan 14 233-247 '63.

1. Department of Forest Planning, College of Agriculture,
Poznan.

ZABIELSKI, Boleslaw; MAGNUSKI, Konrad; WAZYNSKI, Bohdan; ZOLCIAK, Edward

Forest stands of Babia Gora National Park and their natural conditions. Prace nauk roln i lesn 17 nr.2:307-354, '64.

Prospective premises for a conversion of the forest stands of Babia Gora National Park. Ibid.:355-373

1. Department of Forest Planning, Higher School of Agriculture, Poznan.

MROCZKIEWICZ, Leon; ZABIELSKI, Stanislaw

Observations made on a poplar plantation on the experiment forest farm Zielonka. Roczniki wyz szkola rol Poznan 14 109-118 '63.

1. Department of Specific Forest Cultivation, College of Agriculture, Poznan.

KRYSTER, Jan, mgr inz.; ZABIELSKI, Jerzy, mgr inz.

Heating, water supply, and sewerage equipment in bus and street car terminal stations. Gaz woda techn sanit 37 no.10:330-332 0 '63.

1. Stolica Design Office of Communal Constructions, Warsaw.

ZABIERCOWSKI, Wladyslaw, mgr.

Quarterly conferences of the local branch chairmen of the Association of
Engineers and Technicians of the Textile Industry. Przegl techn
no.30:14. J1 '62.

1. Przewodniczacy Glownej Komisji Oddzialow i Kol Zakladowych,
Stowarzyszenia Inzynierow i Technikow Przemyslu Wlokienniczego,
Warszawa.

ISAYEV, P.S.; KONDRATYUK, I.T.; ZABIGAYLO, V.Ye.

Gas manifestation in the Pavlograd-Petropavlovka area of the
Donets Basin, Izv.vys.ucheb.zav.,; geol. i razv. 6 no.10:68-79
0 '63, (MIRA 18:4)

1, Dnepropetrovskiy gornyy institut im. Artama.

JANKOVIC, M.M.; MISIC, V.; POPOVIC, R.; DANON, J.; RADMI, S.; JOVANOVIĆ, B.;
ZABIJAKIN, V.; MICEVSKI, K.; MARINOVIC, R.Z.; DIKLIC, N.; NIKOLIC, V.;
PAVLOVIC, Z.; TATIC, B.; BLECIC, V.; STJEPANOVIC, Lj.; CEROVIC, M.

Review of periodicals; botany. Bul se Young 9 no.4/5:139-140
Ag-O '64.

ZABIK, W.

Corrosion in boiler equipment. p. 195.

PRZEGLAD MECHANICZNY. (Stowarzyszenie Inzynierow i Technikow Mechanikow Polskich)
Warszawa, Poland
Vol. 18, no. 7, Apr. 1959.

Monthly List of East European Accessions (IEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

ZABIK, Wladyslaw

Stress corrosion of low-carbon steel in the mist of an ammonium
nitrate solution; metallography of corrosion cracks.
Mechanika Gliwice no. 19: 1-19 '63.

ZABIK, Wladyslaw, dr inż.

Phase strain hardening and its effect in the grain growth in
low carbon steel. Przegl mech 22 no.2:44-48 25 J '63.

1. Politechnika Slaska, Gliwice.

ZABIK WLADYSLAW

Poland /Chemical Technology. Chemical Products
and Their Application
Corrosion. Protection from Corrosion.

H-4

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1592

Author : Zabik Wladyslaw

Title : Hydrogen Corrosion of Steel and Procedures for Its
Prevention (Hydrogen Brittleness of Steel).

Orig Pub: Przegl. mech., 1957, 16, No 2, 58-64

Abstract: Consideration of the processes of adsorption of
gases at the surface of the metal and of the
effects thereon of a number of factors (tempera-
ture, composition of the gaseous medium, condition
of the metal surface, different activity of atoms
of the metal on projections and recesses of the
surface, etc.). It is noted that diffusion (D)
of gases takes place in a discontinuous manner and

Card 1/5

Poland /Chemical Technology. Chemical Products
and Their Application
Corrosion. Protection from Corrosion.

H-4

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1592

is a bilateral process. On gas corrosion, films 0.04-0.5 μ thick are formed on Fe, Cu, Al, Mg and other metals. The nature of the structure, the density and adhesion of these films determine the corrosion stability of the metal. Hydrogen corrosion (HC) takes place with a D of H into the metal. Under specific conditions atomic H can diffuse throughout the entire body of the metal. D takes place along the boundaries of the crystals and occurs most readily along sliding surfaces of crystals and at the location of "holes" in the lattice of the metal. It is stated that among all the factors of the ambient medium it is the temperature of the medium that has the

Card 2/5

Poland /Chemical Technology. Chemical Products
and Their Application
Corrosion. Protection from Corrosion.

H-4

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1592

greatest effect on D of H and HC. Examples of HC during acid pickling of Fe, are considered. The effect of the composition of the scale on the rate of evolution of H is noted, as well as the effect of the composition of the metal on its becoming brittle. Steel containing 0.85% C was found to be rendered most brittle. Data are presented, concerning a study of the effect of temperature and pressure, in processes of ammonia synthesis, on HC of steel containing 0.76% C, and of the effect of the C content of steel on the rate of decomposition of cementite. It is pointed out that the most specific method

Card 3/5

Poland /Chemical Technology. Chemical Products
and Their Application
Corrosion. Protection from Corrosion.

H-1

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1592

of determining the effect of hydrogen on steel is the determination of the resilience of the steel. One of the methods of reducing the danger of the occurrence of HC is the use of steel having a low content of C. Alloying of steel with Si, Cu and Ni does not increase its stability to HC; Mn, Mo and W have little effect; whereas Cr, V, Ta, Nb and especially Ti decrease HC. It is necessary to take into account the fact that the amount of Cr in steel depends on the amount of C contained in it. Thus, with 0.11% C the Cr-content must not be less than 4.95%. For equipment used in ammonia synthesis it is recommended to use steel con-

Card 4/5

Poland /Chemical Technology. Chemical Products
and Their Application
Corrosion. Protection from Corrosion.

H-4

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1592

taining not more than 0.15% C, 5-6.5% Cr, not
more than 0.5% Si and not more than 0.5% Mg,
0.45-0.60% Mo, 0.5% V and not more than 0.6%
Ni. The desirability of incorporating Ti in
the steel is noted specifically.

Card 5/5

ZABILKA, V.

SKATSILIK, F. [Skacilik, F.], inzhener (Chekhoslovakiya); ZABILKA, V.,
inzhener (Chekhoslovakiya).

The RB-750 concrete paver. Mekh.trud.rab. 11 no.5:44-46 Ny '57.

(MLRA 10:7)

(Pavements, Concrete) (Road machinery)

ZABINKOVA, N.N.

Translating the Latin names of plants into Russian; on the
problem of Russian botanical nomenclature. Bot.zhur. 50
no.7:962-966 J1 '65. (MIRA 18:11)

1. Voenno-meditsinskaya akademiya imeni Kirova, Leningrad.

PAMPUCH, R.; ZABINSKA, T.

Industrial quality testing of plugs and kettle bricks by
ultrasonic method. Eptioanyag 14 no.6:229-234 Js '62.

1. Tuzalloanyagipari Kutató Intézet, Gliwice, Poland.

ZABINSKI, E.

"Survey of the inventiveness of workers in the Machine Institute in Krakow,"
Mechanik, Warszawa, Vol 27, No 1, Jan. 1954, p. 40.

SO: Eastern European Accessions List, Vol 3, No 11, Nov 1954, L.C.

ZABINSKI, Jan, dr

Something, a little more than vitamins. Problem 18
no. 10:692-695 '62.

ZABINSKI, J.

ZABINSKI, J.

How to increase the defensive properties of an organism, p. 10. (ZDROWIE, Warszawa, Vol. 6, no. 8, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955, Uncl.

ZABINSKI, Jan, dr

Solitude means death. Review of a motion picture. Problem 19 no.3:
201-204 '63.

ZABINSKI, J.

Lead poisoning, p. 11. (ZDROWIE, Warszawa, Vol. 6, no. 8, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, Jan. 1955,
Uncl.

ZABINSKI, J.

The use of cosmetics; health and beauty, p. 12. (ZDROWIE, Warszawa, Vol. 6, no. 8, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, Jan. 1955, Uncl.

ZABINSKI, J.

When a mother has too little nourishment; advice to future mothers, p. 12. (ZIROWIE, Warszawa, Vol. 6, no. 8, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955, Uncl.

ZABINSKI, J.

Hygienic actualities; August, p. 12. (ZDROWIE, Warszawa, Vol. 6, no. 8, p. 12.
(ZDROWIE, Warszawa, Vol. 6, no. 8, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955,
Uncl.

ŻABINSKI, Jan, doktor.

Latimeria. Nauka i zhizn' 23 no.5:26-28 '56.

(MLRA 9:8)

1. Direktor Varshavskogo zooparka.
(Latimeria)

1. ZABINSKI, JAN
2. USSR (600)
4. Bison, European - Poland
7. Work in the restoration of bison. Priroda 42, no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ZABINSKI, Jan. dr

Zoological terminology. Problemy 19 no.9:578-581 '63.

KOWIECZKA-MARCZYŃSKA, Barbara; SKOWRON-CENDEZAK, Anna; ZABINSKI, J.

Further investigations on parabiologic intoxication in white mice. *Folia biologica* 9.no.2:131-134 '61.

1. Department of Experimental Zoology, Polish Academy of Sciences, Krakow and Department of Biology and Embriology, Medical Academy, Krakow. Head: S. Skowron, Ph. D.

*

ZABINSKI, Jan, dr

Deathly fear. Problemy 18 no.3:173-176 '62.

KONIECZNA-MARCZYNSKA, Barbara; PLONKA, Irena; SKOWRON-CENDRZAK, Anna;
ZABINSKI, J.

Hematological and serological investigations in heteroparasitosis after
preimmunisation of one of the parabionts. Folia biol 8 no.1/2:83-87
'60. (PMAT 10:4)

1. Department of Experimental Zoology, Polish Academy of Sciences,
Krakow and Department of Biology and Embryology, Medical Academy,
Krakow; head: Prof. Dr.S.Skowron.
(PARABIOSIS)
(BLOOD)

SKOWRON-CENDRZAK, Anna; ZABINSKI, J.

Further investigations on parabiotic intoxication in splenectomized mice. Folia biol 8 no.3:157-165 '60. (EKAI 10:6)

1. Department of Experimental Zoology, Polish Academy of Sciences, Krakow. Head: S. Skowron, Ph.D.
(PARABIOSIS) (SPLENECTOMY)

ZABINSKI, Marian

Determining the minimum surface of sheet metal used for the construction of cylindrical tanks. Problem of proj hut maszyn 10 no.12:380-381 D '62.

1. Biprohut, Gliwice.

ZABINSKI, Marion, mgr. inv.

Work line calculations of continuous steel strip pickling in
sulfuric acid. Hutnik 31 no.12:389-394 D '64.

COUNTRY	: Poland	D
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 22 1959, No.	78191
AUTHOR	: Kubisz, J. and Zabinski, W.	
INST.	: Polish Academy of Sciences	
TITLE	: The Jarosites from the Silesia-Crakov Zinc and Lead Ore Deposits	
ORIG. PUB.	: Bull Acad Polon Sci, Ser Sci Chim, Geol et Geograph, 6, No 12, 793-797, LVI (1958)	
ABSTRACT	: Mineralogic studies of the oxidation zones of Pb-Zn ore deposits as well as x-ray structure, thermal, and chemical analyses (4 samples) indicate that minerals with a chemical composition intermediate between that of plumbojarosite and carphosiderite are encountered along with typical plumbojarosites. The jarosite concentrations studied were formed in modern times on the walls of mines and underground excavations.	
	V. Kudryashova	

CARD: 1/1

76

ZABINSKI, W.

Note on grossular and hydrogrossular-like Vesuvianite in the calc-silicate rocks from Kletno, Lower Silesia. Bul geolog PAN 11 no. 4:223-229 '63.

1. Department of Mineralogy and Petrography, School of Mining and Metallurgy, Krakow. Presented by A. Bolewski.

STOCH, L.; ZABINSKI, W.

Some aspects of the thermal dissociation of minerals as studied by the DTA method. Bul geolog PAN 11 no.2:87-91 '64.

1. Department of Mineral Raw Materials and Department of Mineralogy and Petrography of the School of Mining and Metallurgy, Krakow. Presented by A. Bolewski.

KUBISZ, J.: ZABINSKI, W.

The jarosites from the Silesia-Krakow zinc and lead ore deposits.
Bul Ac Pol chim 6 no.12:793-797 '58. (REAL 9:6)

1. Department of Mineralogy and Petrography, School of Mining and
Metallurgy, Cracow. Presented by A. Bolewski.
(Poland-- Jarosite) (Poland-- Zinc) (Poland-- Lead)

ZABINSKI, W.

Zincian dolomite from the Warynski Mine, Upper Silesia. Bul Ac Pol
chim 7 no.5:355-358 '59. (HEAI 9:9)

1. Department of Mineralogy and Petrography, School of Mining and
Metallurgy, Cracow. Presented by A.Bolewski.
(Poland--Dolomite) (Poland--Zinc)

ZABINSKI, W.

COUNTRY : Poland

CATEGORY :

D

ABS. JOUR. : RZKhim., No. 20 1959, No. 71132

AUTHOR : Zabinski, W.

INST. : Polish Academy of Sciences

TITLE : Epsomite and Melanterite from Boleslaw Near Olkusz.

ORIG. PUB. : Bull. Acad. polon. sci. Ser. sci. chim. geol. et geogr., 1958, 6, No 11, 717-721, LII

ABSTRACT : Investigation of heptahydrates of the sulfates of Mg, Fe, and Zn, from old drifts of Pb-Zn-mines. Chemical analyses are given for 6 specimens of epsomite (I) and specimens of melanterite (II). Contents range, respectively (in %): MgO 8.11-16.18; 0.48-4.04; ZnO 0.16-12.52; 2.49-12.46; FeO 0.01-1.56; 11.19-22.64; MnO 0.005-0.23; 0.01-0.04; SO₃ 30.02-32.65; 28.36-29.55; H₂O 47.64-51.29; 45.11-46.82; Al₂O₃ < 0.1; < 0.2; CaO, Na₂O and K₂O < 0.01; < 0.03; Cd < 0.001; traces; Ni 0.002-0.0055; 0.0015-0.0028; Co < 0.001; < 0.001. I with a higher content of Zn (8.38-12.52%), called zinc-I, is an intermediate member of the continuous series I - goslarite, which was previously

CARD: 1/2

8